R10272919

BECHTEL	**MECHANICAL SYSTEMS DATA SHEET: VESSEL**	**PLANT ITEM No.** *24590-HLW-MV-HDH-VSL-00001*

ISSUED BY RPP-WTP PDC [illegible] 3/19/04 INIT DATE

Project:	***RPP-WTP***	P&ID:	***24590-HLW-M6-HDH-P0002***
Project No:	***24590***	Process Data Sheet:	***N/A***
Project Site:	***Hanford***	Vessel Drawing	***Part of Canister Rinse Bogie Drawing by Mechanical Handling, see 24590-HLW-M0-HDH-P0012001 and 24590-HLW-M0-HDH-P0012002.***
Description:	***Canister Rinse Tunnel Canister Rinse Vessel***		

Reference Data

Charge Vessels (Tag Numbers)	***N/A***
Pulsejet Mixers / Agitators (Tag Numbers)	***N/A***
RFDs/Pumps (Tag Numbers)	***N/A***

Design Data

Quality Level		***Commercial Grade***	Fabrication Specs	***Generally in accordance with ASME SEC VIII D1***		
Seismic Category		***SC-III***	Design Code	***Generally in accordance with ASME SEC VIII D1 (Note 4)***		
Service/Contents		***Water / Possibly Radioactive***	Code Stamp	***N/A***		
Design Specific Gravity		***1.00***	NB Registration	***N/A***		
Maximum Operating Volume	gal	***360 (Note 8)***	Weights (lbs)	Empty	Operating	Test
Total Volume	gal	***3314 (Note 8)***	Estimated		***(Note 3)***	
			Actual *			

Inside Diameter	inch	***71 (Note 6)***			Wind Design	***N/A***	
Length/Height (TL-TL)	inch	***204.75 (Note 6)***			Snow Design	***N/A***	
		Vessel Operating	Vessel Design	Coil/Jacket Design	Seismic Design	***24590-WTP-3PS-MV00-TP002 24590-WTP-3PS-FB01-T0001***	
Internal Pressure	psig	***ATM***	***10 (Note5)***		Seismic Base Moment *	ft*lb	
External Pressure	psig	***ATM***	***ATM***		Postweld Heat Treat		
Temperature	°F	***68***	***212***		Corrosion Allowance	Inch	***0.04 (Note 9)***
Min. Design Metal Temp.	°F	***50***			Hydrostatic Test Pressure *	psig	

Note:
Please note that source, special nuclear and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA), are regulated at the U.S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority. DOE asserts, that pursuant to the AEA, it has sole and exclusive responsibility and authority to regulate source, special nuclear, and byproduct materials at DOE-owned nuclear facilities. Information contained herein on radionuclides is provided for process description purposes only.

Grant D. Marr 3/19/04

GRANT D. MARR STATE OF WASHINGTON 23770 REGISTERED PROFESSIONAL ENGINEER EXPIRES 12-26-05

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REV	DATE	REASON FOR REVISION	PREPARER	CHECKER	REVIEWER	APPROVER

DATA SHEET #:24590-HLW-MVD-HDH-P0009, Rev 0

	MECHANICAL SYSTEMS DATA SHEET: VESSEL	PLANT ITEM No. 24590-HLW-MV-HDH-VSL-00001

Materials of Construction

Component	Material	Minimum Thickness / Size	Containment
Top Head	***N/A (Note 1)***	***N/A***	
Shell	***SA 240 316 with max. carbon of 0.030%***	*	
Bottom Head	***SA 240 316 with max. carbon of 0.030% (Note 7)***	*	
Support	***N/A***	***N/A***	
Jacket/Coils/Half-Pipe Jacket	***N/A***	***N/A***	
Internals	***N/A***	***N/A***	
Pipe	***SA 312 316 with max. carbon of 0.030%***	***N/A***	
Forgings/ Bar stock	***N/A***	***N/A***	
Bolting/Gaskets			

Miscellaneous Data

Orientation	***Vertical***	Support Type	***Bogie (Note 2)***
Insulation Function	***Not Applicable***	Insulation Material	***N/A***
Insulation Thickness (inch)	***Not Applicable***	Internal Finish	*
		External Finish	*

Remarks

* To be determined by the vendor.

NOTE 1: VESSEL TO BE PROVIDED WITH AN OPEN TOP AND AN INFLATABLE SEAL DESIGN OR APPROVED EQUAL (BY SUPPLIER). RECOMMENDED MATERIAL IS EPDM.

NOTE 2: VESSEL IS TO BE MOUNTED ON BOGIE.

NOTE 3: VESSEL TO SUPPORT A CANISTER WEIGHING APPROXIMATELY 10,000 LBS, AS WELL AS SUPPORT A SPRAY AND GUIDE ASSEMBLY. THE CANISTER WILL BE PLACED INSIDE THE VESSEL TO BE SPRAYED WITH WATER.

NOTE 4: PERFORM 100% RADIOGRAPHY.

NOTE 5: DUE TO WATER STATIC HEAD IF RINSE BOGIE PUMP MALFUNCTIONS AND WATER CONTINUES TO FILL UP THE VESSEL.

NOTE 6: FABRICATION TOLERANCES BETWEEN VESSEL AND BOGIE IS THE RESPONSIBILITY OF THE SUPPLIER.

NOTE 7: VESSEL BOTTOM HEAD (TORISPHERICAL DISHED END) SPECIFIED BY BOGIE SUPPLIER.

NOTE 8: VESSEL VOLUMES ARE NOMINAL AND DO NOT ACCOUNT FOR MANUFACTURING TOLERANCES, NOZZLES, AND DISPLACEMENT OF INTERNALS.

NOTE 9: THE CORROSION ALLOWANCE SHALL BE APPLIED TO EACH SURFACE EXPOSED TO PROCESS VAPOR OR LIQUID.

	MECHANICAL SYSTEMS DATA SHEET: VESSEL	PLANT ITEM No. 24590-HLW-MV-HDH-VSL-00001

Equipment Cyclic Data Sheet

Component Plant Item Number:	***24590-HLW-MV-HDH-VSL-00001***
Component Description	***Canister Rinse Tunnel Canister Rinse Vessel***

The information below is provisional and envelopes operational duty for fatigue assessment. It is not to be used as operational data.

Materials of Construction	***A 240 316L***
Design Life	***40 Years***
Component Function and Life Cycle Description	***Transport and spray HLW canister.***

Load Type		Min	Max	Number of Cycles	Comment
Design Pressure (-ve/+ve)	psig	***N/A***	***N/A***	***N/A***	
Operating Pressure (-ve/+ve)	psig	***Atm***	***Atm***	***N/A***	
Operating Temperature	°F	***59***	***200***	***29,200***	***Fluid minimum temperature based on process datasheet 24590-HLW-MVD-HDH-00004***
Contents Specific Gravity		***1.00***	***1.00***	***N/A***	
Contents Level	inch	***Empty***	***Full***	***29,200***	
Localized Features					
Nozzles				***Three - 1 inch level transmitter; One - 2 inch vent line***	
Air Inlet				***One - 1 inch air inlet***	
Delivery				***Two - 2 inch water inlet; One - 3 inch pump suction***	
Supports				***Canister supports shall withstand 29,200 life time cycles of loading and unloading of the canister weighed approx. 10,000 lb.***	

Notes

Cycle Increase: The Seller must increase the numbers of operational cycles given above by 10% to account for commissioning duty unless otherwise noted.

Nozzle	Description	Size		
1	Inflatable Boot Air Supply	1"		
2	Water Supply to Upper Spray Assembly	2"		
3	Water Supply to Lower Spray Assembly	2"		
7	Level Transmitter Nozzle	1"	Size provided by Vendor	
8	Level Transmitter Nozzle	1"		
6	Level Transmitter Nozzle	1"		
5	Vessel Effluent to Pump Suction	3"	Size provided by Vendor	
4	Vessel Vent Line	2"	Size provided by Vendor